WHAT IS CLAIMED IS:

1. A system for providing real-time image control and processing for use in wide area space based surveillance utilizing an Optical Tera-bps Satellite (OPTSAT) network, including a plurality of OPTSATs, the system comprising:

at least one surveillance aperture operatively linked to at least one of the plurality of OPTSATs for imaging an object;

at least one image processor for processing optical image data obtained by the at least one surveillance aperture; and

at least one terminal capable of wirelessly transceiving information between the at least one terminal and the at least one of the plurality of OPTSATs.

2. The system of Claim 1, wherein the at least one surveillance aperture is connected to a multiple beam optical array transceiver.

3. The system of claim 2, wherein the multiple beam optical array transceiver comprises:

at least one receive amplifier for amplifying received optical signals;

at least one micro-electronic mechanical (MEM) mirror for reflecting free-space optical signals;

at least one bi-directional optical coupler connected to the receive amplifier, and associated with the MEM mirror, for receiving from the connected amplifier an optical signal, and reflecting a free-space optical signal onto and receiving a reflected free-space optical signal from the associated MEM mirror; and

a controller for controlling the aiming of the MEM mirror.

4. The system of Claim 3, further comprising at least one transmit amplifier for amplifying optical signals prior to transmission when utilizing a LADAR.

5. The system of Claim 2, wherein the multiple beam optical imaging sensor array transceiver comprises:

at least one receive amplifier for amplifying received optical signals;

at least one bi-directional optical switch bank having a bi-directional fiber optic input and a plurality of bi-directional fiber optic outputs;

at least one bi-directional optical coupler connected to the receive amplifier, and having a bi-directional port for communicating with the input of the switch bank; and

a controller for controlling the switch bank.

6. The system of Claim 5, further comprising at least one transmit amplifier for amplifying optical signals prior to transmission when utilizing a LADAR.

7. The system of Claim 6, wherein the switch bank comprises a plurality of optical switches connected in a binary branch configuration between the input and the plurality of outputs of the switch bank for at least one of receiving an optical signal at the input of the switch bank and controlling a transmission direction of the free-space optical signals through the surveillance aperture by directing the optical signal to one of the plurality of outputs according to the switching of the optical switches, and

receiving a free-space optical signal at one of the output ports of the switch bank by controlling the receiving direction of the multiple beam optical array transceiver according to the switching of the optical switches.

8. The system of Claim 1, wherein the at least one image processor is included in at least one of the plurality of OPTSATs.

9. The system of Claim 1, wherein the at least one image processor is located in a ground based image processing center.

10. The system of Claim 1, wherein the at least one image processor is included in the at least one terminal.

11. The system of Claim 1, wherein the at least one terminal includes a display for displaying an image of the object.

12. A method for providing real-time image control and processing for use in wide area space based surveillance utilizing an Optical Tera-bps Satellite (OPTSAT) network, including a plurality of OPTSATs, the method comprising:

imaging an object with at least one surveillance aperture operatively linked to at least one of the plurality of OPTSATs;

processing optical image data obtained by the at least one surveillance aperture in at least one image processor; and

displaying an image of the object in at least one terminal capable of wirelessly transceiving information between the at least one terminal and the at least one of the plurality of OPTSATs.

13. The method of Claim 12, further comprising controlling the at least one surveillance aperture using a multiple beam optical array transceiver.

14. The method of Claim 12, wherein the step of processing the optical image data is performed onboard at least one of the plurality of OPTSATs.

15. The method of Claim 12, wherein the step of processing the optical image data is performed in a ground based image processing center.

16. The method of Claim 12, wherein the step of processing the optical image data is performed in the at least one terminal.

17. The method of Claim 12, wherein the step of processing the optical image data obtained by the at least one surveillance aperture is performed in a plurality of ground based image processing centers.

18. A method for providing real-time image control and processing for use in wide area space based surveillance utilizing an Optical Tera-bps Satellite (OPTSAT) network, including a plurality of OPTSATs, the method comprising:

requesting a satellite image of an object by a user at an OPTSAT terminal;

connecting the user to an OPTSAT with imaging capabilities;

enabling the user to control the OPTSAT to obtain image data of the object;

processing the image data; and

displaying the satellite image of the object.

19. The method of Claim 18, wherein the step of processing the image data is performed in the OPTSAT terminal.

20. The method of Claim 18, wherein the step of displaying the satellite image of the object is performed in the OPTSAT terminal.

21. The method of Claim 18, wherein the step of processing the image data is performed in an image center that is separate from the OPTSAT terminal, the processed image data is sent to the OPTSAT terminal, and the satellite image is displayed in the OPTSAT terminal.

22. The method of Claim 18, wherein the step displaying the satellite image is performed in a plurality of display terminals included in the OPTSAT Network.